CLAIMS AMENDMENTS

1. (currently amended) A method for preparing dispensable sophorolipids having spermicidal and/or antiviral properties comprising the steps of:

a) fermenting *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b) treating the natural mixture with lipase in the presence of an alkoxide to form a sophorolipid ester; and

~~b~~ c) formulating the ~~natural mixture of sophorolipids~~ sophorolipid ester with an excipient for dispensing the ~~natural mixture of sophorolipids~~ sophorolipid ester,

wherein the sophorolipid ester has spermicidal and/or antiviral properties.

2. (currently amended) A method for producing sophorolipids having spermicidal and/or antiviral properties comprising the steps of:

a) synthesizing the sophorolipid by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids; ~~and~~

b) treating the natural mixture with lipase in the presence of an alkoxide to form a sophorolipid ester;

~~b~~ c) combining the ~~natural mixture~~ sophorolipid ester with a known spermicidal agent or known antiviral agent to form an ester-agent mixture; and

~~c~~ d) formulating the ~~natural mixture~~ ester-agent mixture with an excipient for dispensing the ~~natural mixture of sophorolipids~~ ester-agent mixture

wherein the ester-agent mixture has spermicidal and/or antiviral properties.

3. (currently amended) A method for producing sophorolipids having spermicidal and/or antiviral properties comprising the steps of:

a) synthesizing the sophorolipid by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b) separating the lactonic sophorolipids from the natural mixture to form a lactonic fraction ~~and mixing all remaining fractions to form a non-lactonic fraction~~;

c) combining the lactonic fraction with lipase in the presence of an alkoxide to form sophorolipid esters; and

d) formulating the sophorolipid esters with an excipient for dispensing the sophorolipid esters,

wherein the sophorolipid esters have spermicidal and/or antiviral properties.

4. (cancelled).

5. (previously presented) The method as claimed in Claim 3, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

6. (previously presented) The method as claimed in Claim 3, wherein the sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

7. – 27. (cancelled).

28. (previously presented) The method as claimed in Claim 1, wherein the excipient is selected from the group consisting of a gel, a film, a foam, a suppository, a pessary, a liposomic formulation, and a sponge.

29. (previously presented) The method as claimed in Claim 2, wherein the excipient is selected from the group consisting of a gel, a film, a foam, a suppository, a pessary, a liposomic formulation, and a sponge.

30. (previously presented) The method as claimed in Claim 3, wherein the excipient is selected from the group consisting of a gel, a film, a foam, a suppository, a pessary, a liposomic formulation, and a sponge.

31. – 54. (cancelled).

55. (currently amended) A method for preparing dispensable sophorolipids having spermicidal and/or antiviral properties comprising the steps of:

a) fermenting *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b) separating the lactonic sophorolipids from the natural mixture to form a lactonic fraction and mixing all remaining fractions to form a non-lactonic fraction;

c) treating the lactonic fraction with lipase in the presence of an alkoxide to form a sophorolipid ester and

~~c~~ d) formulating the treated lactonic ~~sophorolipids~~ fraction, the non-lactonic ~~sophorolipids~~ fraction, or a combination of thereof with an excipient to form a dispensable formulation,

wherein the dispensable sophorolipids have spermicidal and/or antiviral properties.

56. – 57. (cancelled).

58. (new) A method for preparing dispensable sophorolipids having spermicidal and/or antiviral properties comprising the steps of:

a) fermenting *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b) treating the natural mixture of lactonic and non-lactonic sophorolipids with an alkoxide to form an ester at the carbonyl of the lactonic sophorolipids and of the non-lactonic sophorolipids to form a sophorolipid ester;

c) treating the sophorolipid ester with lipase and an activated ester to form an ester at at least one hydroxyl position of the sophorolipid polar head group to form a sophorolipid compound having spermicidal and/or antiviral properties; and

d) formulating the sophorolipid compound with an excipient for dispensing the sophorolipid compound.

59. (new) The method as claimed in Claim 58, wherein the alkoxide is derived from an alcohol having is a compound of the structure R-OH, wherein the R group comprises between 1 and 12 carbon atoms.

60. (new) The method as claimed in Claim 58, wherein the alkoxide is a sodium alkanoate metal salt.

61. (new) The method as claimed in Claim 58, wherein the activated ester is an activated esters of linear or branched acids.

62. (new) The method as claimed in Claim 61, wherein the activated ester is selected from the group consisting of vinyl acetate, vinyl propionate, and vinyl butyrate.

63. (new) The method as claimed in Claim 58, wherein, when treating the sophorolipid esters with lipase and an activated ester to form an ester at at least one hydroxyl position of the sophorolipid polar head group, the sophorolipid is esterified with acetate groups.

64. (new) The method as claimed in Claim 1, wherein the alkoxide is a sodium alkanoate metal salt.

65. (new) The method as claimed in Claim 2, wherein the alkoxide is a sodium alkanoate metal salt.

66. (new) The method as claimed in Claim 3, wherein the alkoxide is a sodium alkanoate metal salt.

67. (new) The method as claimed in Claim 55, wherein the alkoxide is a sodium alkanoate metal salt.

68. (new) The method as claimed in Claim 1, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

69. (new) The method as claimed in Claim 1, wherein the sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

70. (new) The method as claimed in Claim 2, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

71. (new) The method as claimed in Claim 2, wherein the sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

72. (new) The method as claimed in Claim 55, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

73. (new) The method as claimed in Claim 55, wherein the sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

74. (new) The method as claimed in Claim 55, wherein the excipient is selected from the group consisting of a gel, a film, a foam, a suppository, a pessary, a liposomic formulation, and a sponge.